

Safety Evaluation Number<sup>1</sup>: SE-W375-00-00005Revision No: 0ABCN Number: ABCN-W375-00-00005Safety Evaluation Subject: Authorization Basis Maintenance – Proceed at Risk**PART I: DESCRIPTION OF THE PROPOSED REVISION, BACKGROUND, AND SCHEDULE**

## 1. Describe the proposed revision (including credible failure modes, if applicable).

Revises the Integrated Safety Management Plan (ISMP) to allow BNFL Inc. to implement facility changes (both design and programmatic changes) at BNFL'S risk pending both BNFL preparation and submittal of required safety documents – i.e., Safety Evaluation, Authorization Basis Change Notice (ABCN) and Authorization Basis Amendment Request (ABAR) – and Regulatory Unit approval of an ABAR. This “proceed-at-risk” approach will apply only during the design and construction phases. This change also incorporates modified language from RL/REG-97-13, Rev. 5, *Regulatory Unit Position on Contractor-Initiated Changes to the Authorization Basis*, section 3.2.

This proposed change will be part of a BNFL Inc. submittal to the RU that will include the following:

- a proposal that presents a new set of processes and procedures for the RPP-WTP Authorization Basis (AB) Maintenance Program
- suggested changes to RL/REG-97-13
- an ABAR as described herein.

This proposed change does not apply to changes to the approved Quality Assurance Program (QAP) or the approved Radiation Protection Program (RPP).

## 2. Identify the affected Authorization Basis (AB) documents and perform a comparison and assessment of the revision against the AB.

Revises ISMP section 3.3.3, “Changes to the Authorization Basis,” to allow BNFL Inc. to proceed at risk with implementation of changes pending preparation of safety documentation (i.e., Safety Evaluation, ABCN and ABAR) and Regulatory Unit review and approval of ABARs (when required).

BNFL Inc. has already experienced situations in which project work has been held up because desirable, safe and effective standards or practices were inconsistent with current requirements described in the AB. It is likely that similar situations will occur in the future, potentially leading to serious cost and schedule consequences as a result of idling designers or construction work forces while safety documentation is being developed and while Regulatory Unit review is in progress.

BNFL Inc. believes that it will be advisable, on occasion, to “proceed at risk” with certain changes that require modifications to the Authorization Basis.

This revision differs from the current AB, which requires that safety evaluations be performed of all revisions to the AB and that prior approval of the Regulatory Official be obtained before implementing any change for which a safety evaluation determines that RU approval is needed.

## 3. List the references used for the safety evaluation.

- BNFL-5193-ISP-01, Rev. 4b, November 9, 1999, *Integrated Safety Management Plan*, BNFL Inc., Richland, Washington
- BNFL-5193-SRD-01, Rev. 4e, November 2, 1999, *Safety Requirements Document*, BNFL Inc., Richland,

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<sup>1</sup> The Safety Evaluation Number shall be obtained from Project Document Control.

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- RL-REG-97-13, Rev. 5, *Contractor-Initiated Changes to the Authorization Basis*, April 19, 1999, Office of Radiological, Nuclear and Process Safety for TWRS Privatization Contractors, U.S. Department of Energy, Richland, Washington
- *TWRS Privatization Contract No. DE-AC06-96RL13308 – Mod. No. A006*, Part I, Section C, Standard 4, “Safety, Health and Environmental Program,” Table S4-1, “Radiological, Nuclear, and Process Safety Deliverables for Part A and Part B”

4. Describe the planned revision implementation schedule.

Regulatory Unit approval: April 1, 2000.

Change implemented by April 24, 2000.

## PART II: REGULATORY IMPACT OF PROPOSED AB REVISION

The following questions are to be answered as part of the safety evaluation, to determine if the proposed AB revision (and the proposed initiating change if applicable) requires prior RU approval.

- |   | <u>YES</u>                          | <u>NO</u>                |
|---|-------------------------------------|--------------------------|
| 1. Does the revision involve the deletion or modification of a standard previously identified or established in the approved SRD? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

JUSTIFICATION:

**The revision modifies ISMP section 3.3.3, which is an implementing standard cited in the following SRD Safety Criteria (SC): 3.1-7, 7.3-12, 7.4-5, 9.0-4, 9.1-4 and 9.2-5.**

**SC 3.1-7 requires that at least every five years after the completion of the initial process hazard analysis (PHA), the PHA shall be updated and revalidated by a qualified team, to assure that the process hazard analysis is consistent with the current process. This revision does not affect the requirement to periodically update the PHA.**

**SC 7.3-12 requires that changes made to the Quality Assurance Program (QAP) shall be submitted annually to the regulator for review. This revision specifically excludes the QAP from its scope.**

**SC 7.4-5 is concerned with safety evaluations that document the basis for whether a change involves an Unreviewed Safety Question (USQ). Per RL/REG-97-13, safety evaluations are not required to evaluate whether a change would result in a USQ until the Production Operations Authorization has been issued. This revision applies specifically to the design and construction phases, which occur prior to issuance of the Production Operations Authorization; consequently, Safety Criterion 7.4-5 is unaffected by this revision.**

**SRD Safety Criterion 9.0-4 requires that the Authorization Basis be maintained current. This revision allows BNFL Inc., at its own risk, to make changes to the design or administrative controls pending revision of the Authorization Basis. BNFL Inc.'s proposed AB Maintenance program ensures that the AB will be maintained current for such "at-risk" changes by requiring expedited processing of affected revisions through**

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issuance of Deficiency Reports (DRs) against such changes. These DRs provide a tracking mechanism that ensures proper management focus on outstanding AB revisions.

SC 9.1-4 requires that the FSAR shall be reviewed annually and updated as necessary to ensure that the information is current, remains applicable, and reflects all changes implemented up to 3 months prior to the filing of the updated FSAR. The regulatory approval of any Unreviewed Safety Questions, and the material submitted by to the regulator in support of that approval, shall be considered an addendum to the FSAR until the information is incorporated into the FSAR as part of the next periodic update. The FSAR is not approved by the RU until issuance of the Production Operations Authorization. As noted above, USQs are not required to be evaluated until after issuance of the Production Operations Authorization. This revision specifically applies only to the design and construction phases, which occur prior to issuance of the Production Operations Authorization. Consequently, Safety Criterion 9.1-4 is not affected by this revision.

SC 9.2-5 requires that all proposed revisions to technical safety requirements (TSRs), excluding its bases, shall be submitted for regulatory approval prior to implementation of the revision. Per Table S4-1 of the Contract, TSRs are not final until start of Production Operations. This revision specifically applies only to the design and construction phases, which occur prior to Production Operations. Consequently, Safety Criterion 9.2-5 is not affected by this revision.

2. Does the revision result in a reduction in commitment currently described in the AB?



## JUSTIFICATION:

The current ISMP section 3.3.3 requires that a safety evaluation be performed for all changes, whether or not they are required to be approved by the Regulatory Unit. This revision allows BNFL Inc., at its own risk, to make changes while safety documentation, including safety evaluations, is being prepared.

The current ISMP section 3.3.3 states: "Changes impacting the authorization basis that require approval of the Regulatory Unit may be implemented following approval by the Regulatory Official of a request to amend the authorization basis." This statement is a promise by BNFL Inc., in writing and on the docket, to do something (i.e., defer implementation of certain changes until receipt of RU approval) on which the RU has based a decision (i.e., approval of the ISMP) that relates to adequate safety, compliance with laws and regulations, or conformance with top-level safety standards. This revision proposes to allow BNFL Inc. to implement such changes at risk prior to approval by the Regulatory Official. This is a reduction in a commitment in the current ISMP.

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- |   | <u>YES</u>               | <u>NO</u>                           |
|---|--------------------------|-------------------------------------|
| 3. Does the revision result in a reduction in the effectiveness of any program, procedure, or plan described in the AB. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

JUSTIFICATION:

The AB (ISMP section 3.3.3) describes the process of determining whether a change requires prior approval by the Regulatory Unit (RU) and the process of requesting RU approval of those changes that do require approval. BNFL Inc.'s proposal to proceed at risk with certain changes that require Regulatory Unit approval applies only to the design and construction phases (prior to Cold Testing). Thus, such changes would only be permitted prior to the introduction of hazardous or radioactive material to the RPP-WTP. The duration of the "at risk" period will be minimized through the use of a Deficiency Report (DR) and expediting of Authorization Basis Amendment Request preparation, submittal, review and approval. The DRs will be available for RU inspectors to review, so that they may have current knowledge of the status of "alignment" of the as-designed, as-built facility with the AB.

BNFL Inc. proposes that the duration for which a Proceed-at-Risk condition be minimized by expediting preparation of a safety evaluation and submittal of an ABAR to the RU of changes that will proceed at risk. Similarly, BNFL Inc. proposes that the RU perform an expedited review of ABARs that describe changes being implemented at risk. BNFL's proposed changes to RL-REG-97-13 (being submitted along with this ABAR) will provide expedited basis for RU review.

Furthermore, BNFL Inc. proposes to close all open DRs related to "at-risk" changes by Cold Testing; therefore, the AB will be fully aligned with the as-designed, as-built facility well in advance of production operations. The Regulatory Unit will have been fully apprised of all changes that impact the AB in advance of issuance of the Production Operations Authorization.

Given that the hazards evaluated in the AB cannot occur until after issuance of the Production Operations Authorization and that all open DRs related to "at-risk" change implementation will be closed before then, this revision does not constitute a reduction in effectiveness of any program, procedure or plan described in the AB.

Note: Guidance on defining the terms and responding to the above questions is provided in K70C528, Code of Practice for Managing Changes to the Authorization Basis, Appendix 6.

If all the answers to the above questions are no, then the change can be made without prior RU approval.

If any of the above answers is yes, then RU approval is required prior to implementation of the AB revision (and the initiating change if applicable). An ABAR shall be prepared to obtain RU approval (see K70C528, Appendix 7.)

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### **PART III: SAFETY EVALUATION CONCLUSION**

- ☐ All PART II questions are answered No. Therefore, RU approval is NOT required prior to implementing the proposed AB revision (and initiating change where applicable).
- ☒ At least one PART II question is answered Yes. Therefore, RU approval IS required prior to implementing the proposed AB revision (and initiating change where applicable). Issuance of an ABAR is required to obtain RU approval.

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Evaluator/Originator

\_\_\_\_\_  
Date

\_\_\_\_\_  
Reviewer<sup>2</sup>

\_\_\_\_\_  
Date

\_\_\_\_\_  
Radiation Safety and Regulatory Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Chair, Project Safety Committee<sup>3</sup>

\_\_\_\_\_  
Date

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RPP-WTP General Manager<sup>3</sup>

\_\_\_\_\_  
Date

<sup>2</sup> The reviewer should be a person from the same department as the Evaluator/Originator and at least as qualified as the Evaluator/Originator to conduct safety evaluations.

<sup>3</sup> This signature required if Safety Evaluation concludes AB change can be made without RU prior approval. If RU approval (ABAR) is required, PSC and GM signatures occur on the ABAR.